& PIPELINE, SAN PATRICIO COUNTY, **TEXAS** 

SWG-2007-0538

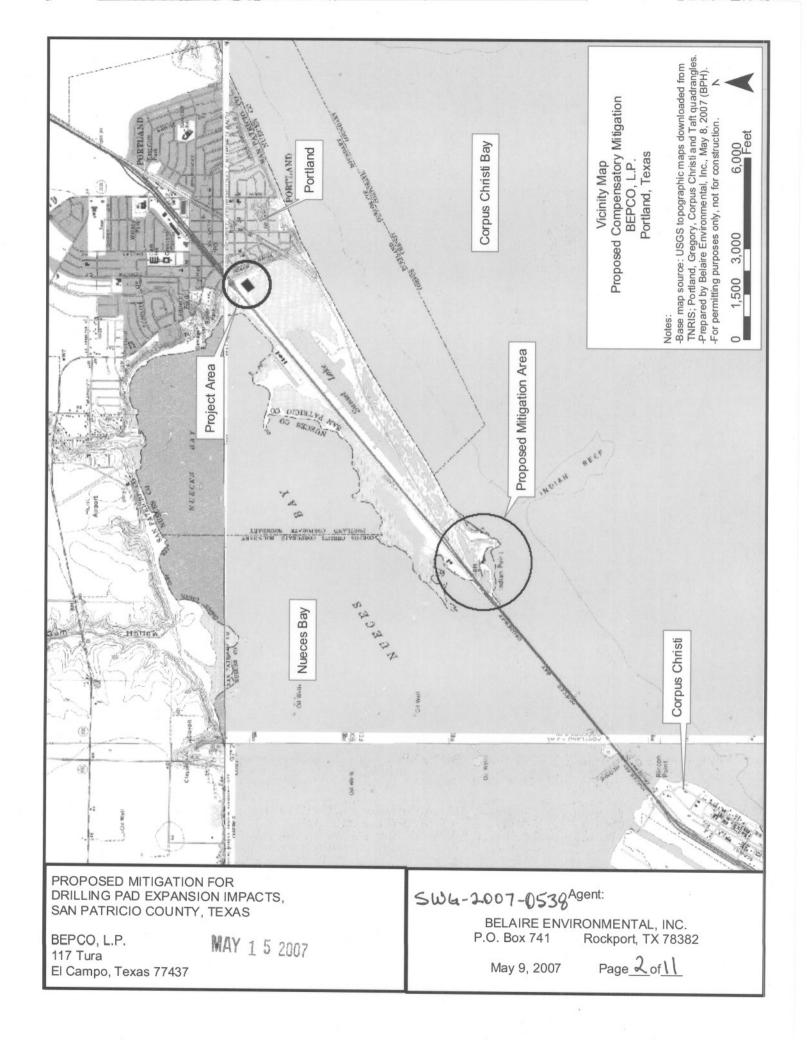
BEPCO, L.P. 117 Tura

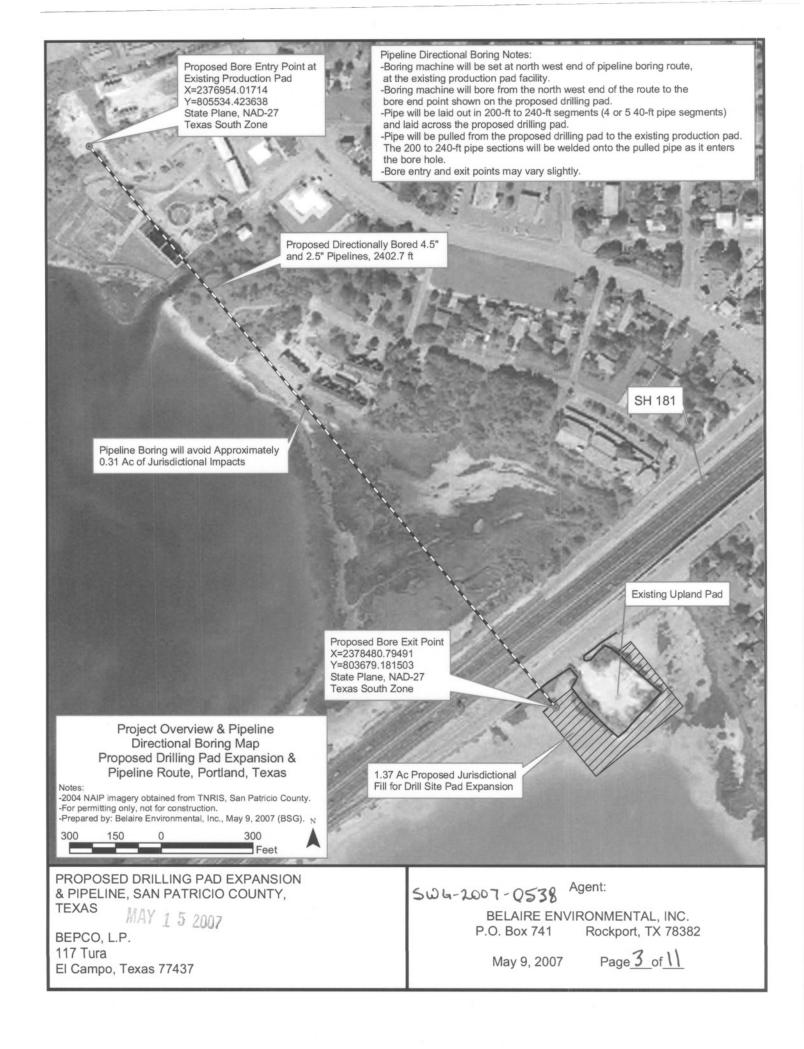
El Campo, Texas 77437

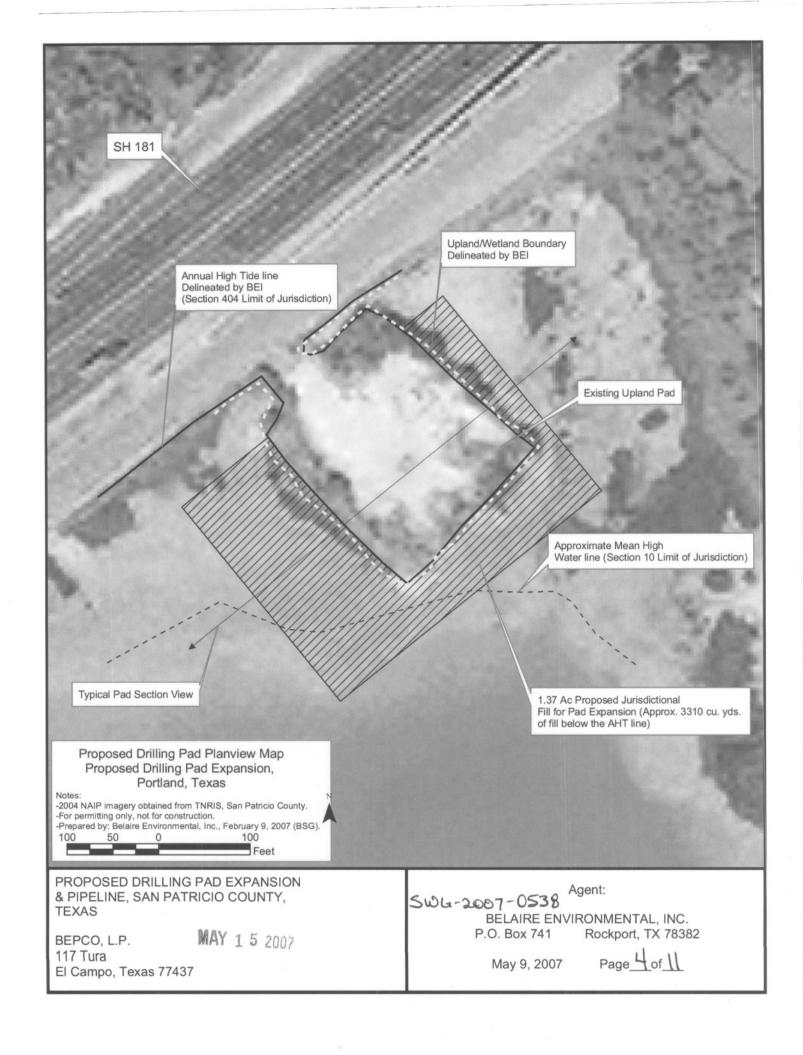
BELAIRE ENVIRONMENTAL, INC. Rockport, TX 78382 P.O. Box 741

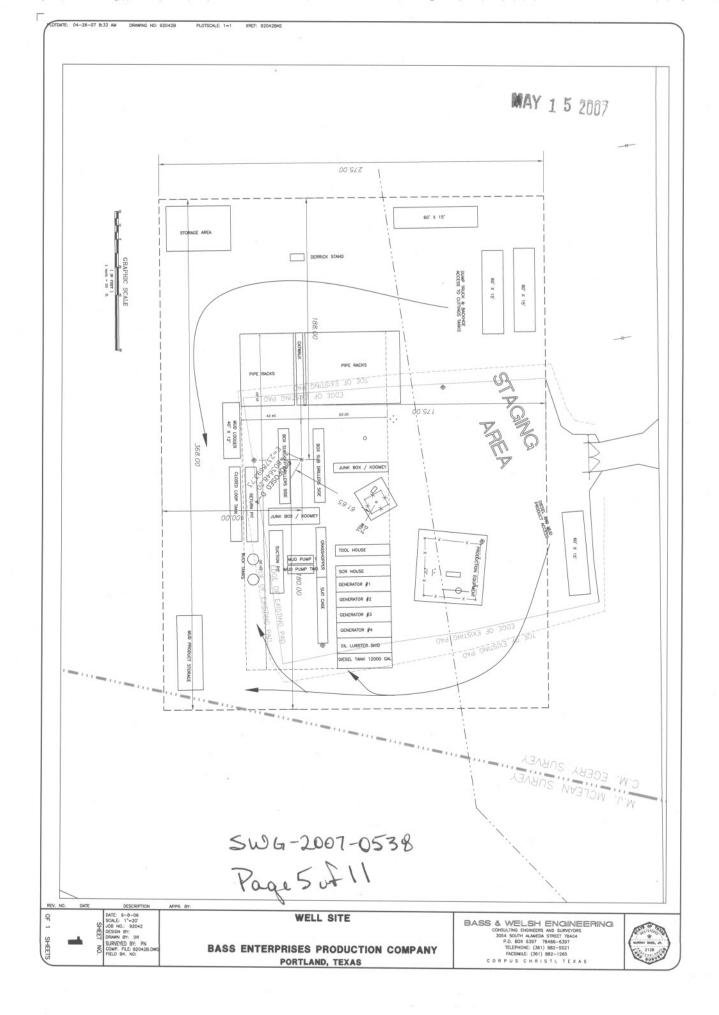
May 9, 2007

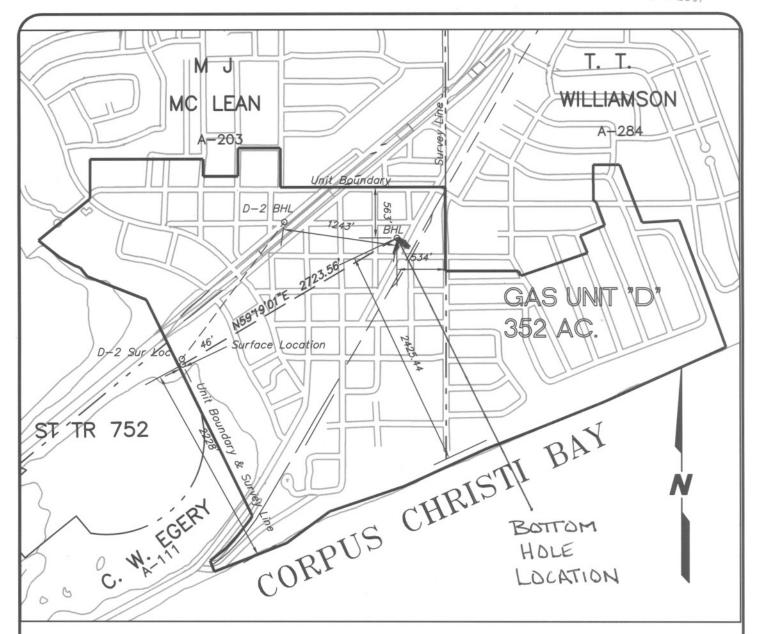
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NOTE: Bearings, Distances and Coordinates are State of Texas, Lambert Grid, South Zone, NAD 1927 (S) Denotes a scaled distance.

PLAT SHOWING LOCATION OF
BASS ENTERPRISES PRODUCTION CO.—GAS UNIT "D", WELL NO. 4
M.J. McLEAN SURVEY, A—203

CITY OF PORTLAND, SAN PATRICIO COUNTY, TEXAS RAILROAD COMMISSION DISTRICT NO. 4



Bottomhole Location X=2,381,036 Y= 805,038

Murray Bass, Jr., R.P.L.S.

Bass & Welsh Engineering
3054 So. Alameda St.

3054 So. Alameda St. Corpus Christi, Tx. 78404 (361) 882-5521 (phone) (361) 882-1265 (fax) SWG-2007-0538

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Job No: 92042 Scale: 1"=1000' Date: 9-21-06 Drawing No: LOCPLATBAS Plotscale: 1=1 Sheet 1 of 1

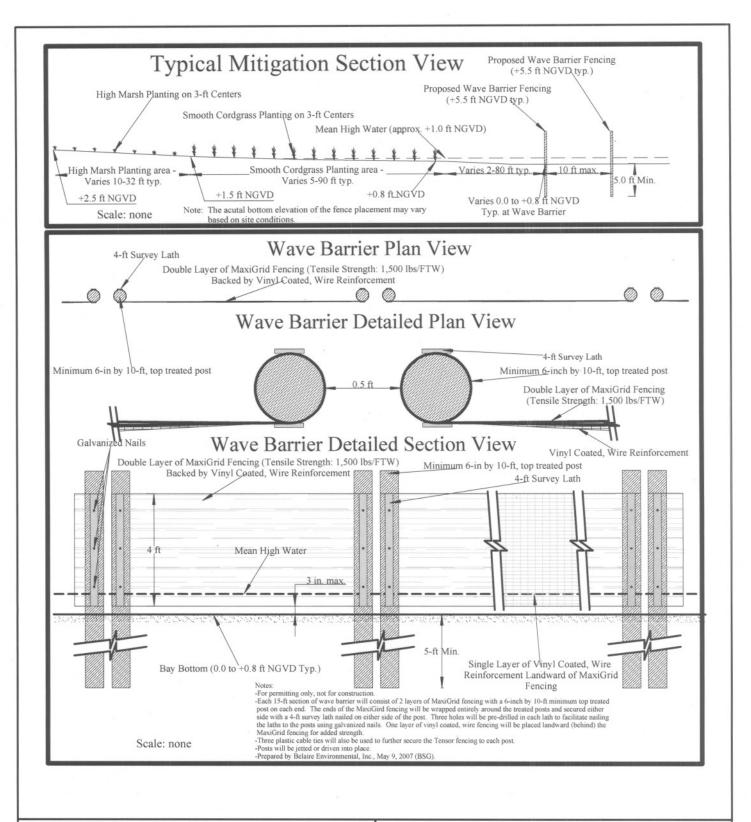
BEPCO, L.P. 117 Tura El Campo, Texas 77437 PROPOSED DRILLING PAD EXPANSION & PIPELINE, SAN PATRICIO COUNTY, TEXAS Typical Section of Proposed Drilling Pad Expansion South West North East Existing Pad (Typical Grade Varies +6.5 to +7.5 ft NGVD 29) Mean High Water line Proposed Fill Proposed Fill, Finished Grade to Match Existing Pad Typically Varies Approx. 3.0 - 4.5 ft Annual High Tide line 368 ft Annual High Tide line Existing Grade Varies 60 ft Scale: |-Typical Profile of Pipeline Boring Proposed Bore Entry Point at Existing Production Pad X=2376954.01714 North West SWG-2007 -0538<sup>Agent:</sup>
BELAIRE ENVIRONMENTAL, INC.
P.O. Box 741 Rockport, TX 78382 Bore Exit Point at South East Existing Pad for Proposed. Expansion X=2378480.79491 Y=805534.423638 State Plane, NAD-27 Texas South Zone Y=803679.181503 Existing Grade Varies State Plane, NAD-27 Texas South Zone May 9, 2007 Min. 15 ft Below Mudline -2402.7 ft-Notes:

Note to Scale

-Prepared by Belaire Environmental, Inc., May 9, 2007 (BSG).

-Pipeline boring dimension are only typical and subject to change of the preparation of the prepara Page\_ -Prepared by: Belaire Environmental, Inc., May 9, 2007 (BSG). lof -For permitting only, not for construction. WAY CT

BEPCO, L.P. 117 Tura El Campo, Texas 77437 PROPOSED MITIGATION FOR DRILLING PAD EXPANSION IMPACTS, SAN PATRICIO COUNTY, TEXAS Smooth Cordgrass Planting Area 1 MAY (Approx. 1,623.4 sq ft) Smooth Cordgrass Planting Area 3 (Approx. 18,637.2 sq ft) (Approx. 0.037 Ac) (Approx. 0.428 Ac) High Marsh Planting Area (Approx. 12, 808.9 sqft) (Approx. 0.294 Ac) Existing Spartina alterniflora (Approx. 3,586.8 sq ft) (Approx. 0.082 Ac) No Seagrass Was Found In The Vicinity Of Planting Area 3 Proposed Wave Barrier Fencing (Approx. 845 linear ft) Proposed Wave Barrier Fencing (Approx. 595 linear ft) Smooth Cordgrass Planting Area 2 (Approx. 26,986.8 sq ft) (Approx. 0.62 Ac) S Approximate Landward Edge Of Seagrass Delineated By BEI BELAIRE ENVIRONMENTAL, INC.
P.O. Box 741 Rockport, TX 78382 May 9, 2007 Agent: Proposed Mitigation Plan View Page\_ BEPCO, L.P. Portland, Texas 00 of -Elevations in NGVD 29 based on COE tide staff in Mean Low Legend Tide (MLT, COE datum) at the Nueces Bay Causeway. -Existing elevation of smooth cordgrass (Spartina alterniflora) ranges from approx. +0.8 to +1.5 NGVD. ----- Wave Barrier Fencing -High marsh elevations range from the upper edge of Smooth cordgrass (+1.5 ft NGVD) to +2.5 NGVD. Edge of Seagrass -Base map source: 1-meter DOQQ obtained online from TNRIS; Approximate Planting Area 2004 Portland quadrangle. Prepared by Belaire Environmental, Inc., May 9, 2007 (BPH). High Marsh Planting Area -For permitting purposes only, not for construction. Existing Spartina Alterniflora



PROPOSED MITIGATION FOR DRILLING PAD EXPANSION IMPACTS, SAN PATRICIO COUNTY, TEXAS

BEPCO, L.P. 117 Tura El Campo, Texas 77437

MAY 1 5 2007

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## **NOTES & MITIGATION**

- 1. Approximately 1.37 Acres of jurisdictional area (0.925 Ac of sand flat and 0.445 Ac of vegetated jurisdictional areas dominated by sea ox-eye daisy (*Borrichia frutescens*), glasswort (*Salicornia virginica*), dwarf glasswort (*Salicornia bigelovii*) and shoregrass (*Monanthochloe litoralis*)) will be impacted by the proposed pad expansion. The applicant has avoided 0.31 Ac of impacts to jurisdictional areas by agreeing to bore the entire 2,402.7 ft long pipeline.
- 2. Compensatory mitigation at a 1:1 ratio for permanent and temporary impacts to wetlands and sand flats will be constructed as indicated in the proposed plans. Two wave barrier fences will be constructed to protect the 1.37 Ac mitigation area from wave action. The planting areas will be planted on 3-ft centers with smooth cordgrass (*Spartina alterniflora*) and high marsh species including sea ox-eye daisy, glasswort, dwarf glasswort shoregrass, marsh-hay cordgrass (*Spartina patens*) and associated species. The mitigation area will have the secondary benefit of protecting approximately 180 acres of existing estuarine wetlands from further erosion. Historical aerial photos indicate that 22.75 acres of wetlands have been lost to erosion between 1948 and 2004. See the attached mitigation plan for wave barrier fence construction details.
- 3. The proposed wave barrier fences will be inspected and repaired, if needed, weekly during the first six weeks post construction and twice monthly thereafter, until six months from the date of mitigation site construction and planting. The wave barriers will be removed two years after installation.
- 4. All mitigation construction and planting will be completed within 6-months of the date impacts to the jurisdictional area occurs.
- 5. Planting, replanting and monitoring will be performed as follows:
  - a. Following sediment conditioning of at least 60 days the area will be planted on 3-ft centers. A planting unit will consist of a sprig of small clump of each of the various salt marsh species. Each planting unit will be securely embedded in the planting surface.
  - b. The USACE shall be notified in writing as to date of actual transplanting activities a minimum of two weeks prior to commencement of these operations.
  - c. Plant material will be obtained from on-site or commercial sources. No more than one 6-inch plug of source material per one square yard shall be obtained from designated borrow areas. Incidental damage to borrow areas shall be strictly avoided.
  - d. Complete photographic coverage of the planting area shall be submitted immediately prior to and following transplanting activities.

PROPOSED DRILLING PAD EXPANSION & PIPELINE, SAN PATRICIO COUNTY, TEXAS

BEPCO, L.P. 117 Tura El Campo, Texas 77437

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- e. Agencies shall be notified in writing upon completion of the planting effort.
- f. A monitoring effort will be conducted within 60 days following the initial planting effort. If 50% survival of transplant material is not achieved, a 2<sup>nd</sup> planting effort will be made within the next 30 days or within the next seasonal high tide period (Sept 15 to Nov 15 or Mar 15 thru June 15) for estuarine and high marsh areas. A written report detailing the results of this effort shall be submitted immediately following the survey.
- g. If at least 70% coverage of vegetation indicative of wetlands (FAC or wetter) is not achieved within two years following the initial planting an additional replanting will be performed within the next 30 days or within the next seasonal high tide period (Sept 15 to Nov 15 or Mar 15 thru June 15) for estuarine marsh areas. A written report detailing the results shall be submitted to the USACE immediately following the survey.
- h. A monitoring study will be conducted following the planting. The percent coverage will be monitored within the mitigation area. The monitoring study will note any unusual sedimentation variations and will include depth of soft-sediment accumulations throughout the site. Rates of erosion and other observations will also be made. Subsequent progress reports containing the referenced information shall be submitted to the agencies at 6-months and then yearly for a period of 5 years following the initial planting. From the date vegetation coverage achieves 70%, annual monitoring and reporting will continue for three additional years. Replanting will occur annually if 70% coverage is not achieved during any of the additional monitoring efforts.
- i. Monitoring reports will list the monitoring requirements and performance standards and evaluate whether the compensatory mitigation site is successfully achieving the approved performance standards or trending toward success. Summary data will be provided to substantiate the success and/or potential challenges associated with the compensatory mitigation project. Photo documentation shall be provided to support the findings. Maps will be provided indicating the location of the compensatory mitigation site relative to other landscape features, habitat types, locations of photographic reference points, transects, sampling data points, and/or other pertinent features. A general statement will be included describing the conditions of the compensatory mitigation site. If performance standards are not being met, an explanation of the difficulties and potential remedial actions proposed by the permittee, including a timetable, will be provided.

PROPOSED DRILLING PAD EXPANSION & PIPELINE, SAN PATRICIO COUNTY, TEXAS

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